WHAT IS CLAIMED IS:

1. A method of performing a real-time operation including a combination of a plurality of tasks, the method comprising:

inputting structural description information and a plurality of programs describing procedures corresponding to the tasks, the structural description information indicating a relationship in input/output between the programs and including cost information concerning a time required for executing each of the programs;

determining an execution start timing and execution term of each of a plurality of threads for execution of the programs based on the structural description information; and

performing a scheduling operation of assigning the threads to one or more processors according to a result of the determining.

2. The method according to claim 1, wherein the structural description information includes coupling attribute information indicative of a coupling attribute between the programs, and

the method further comprises selecting a tightly coupled thread group from among the plurality of threads based on the coupling attribute information, the tightly coupled thread group including a set of tightly coupled threads running in cooperation with

each other, and

determining several processors of the processors, to which the tightly coupled threads are to be assigned, to simultaneously execute the tightly coupled threads by the several processors, the several processors being equal in number to the tightly coupled threads.

3. The method according to claim 2, wherein each of the several processors includes a local memory, and the method further comprises mapping the local memory of one of the several processors, which executes one of the tightly coupled threads, in part of an effective address space of another of the tightly coupled threads executed by another of the several processors.

4. An information processing system which performs a real-time operation including a combination of a plurality of tasks, the system comprising:

a plurality of processors;

means for storing structural description information and a plurality of programs describing procedures corresponding to the tasks, the structural description information indicating a relationship in input/output between the programs and including cost information concerning time required for executing each of the programs;

means for determining an execution start timing and execution term of each of a plurality of threads

for execution of the programs based on the structural description information; and

means for performing a scheduling operation of assigning the threads to at least one of the processors according to a result of the determining.

5. The information processing system according to claim 4, wherein the structural description information includes coupling attribute information indicative of a coupling attribute between said plurality of programs, and

the system further comprises means for selecting a tightly coupled thread group from among the plurality of threads based on the coupling attribute information, the tightly coupled thread group including a set of tightly coupled threads running in cooperation with each other, and

means for determining several processors of the processors, to which the tightly coupled threads are to be assigned, to simultaneously execute the tightly coupled threads by the several processors, the several processors being equal in number to the tightly coupled threads.

6. The information processing system according to claim 5, wherein each of said plurality of processors includes a local memory, and the system further comprises means for mapping the local memory of one of the several processors, which executes one of the

tightly coupled threads, in part of an effective address space of another of the tightly coupled threads executed by another of the several processors.

7. A program which is stored in a computer-readable media and causes a computer including a plurality of processors to perform a real-time operation including a combination of a plurality of tasks, the program comprising:

causing the computer to input structural description information and a plurality of programs describing procedures corresponding to the tasks, the structural description information indicating a relationship in input/output between the programs and including cost information concerning a time required for executing each of the programs;

causing the computer to determine an execution start timing and execution term of each of a plurality of threads for execution of the programs based on the structural description information; and

causing the computer to perform a scheduling operation of assigning the threads to one or more processors according to a result of the determining.

8. The program according to claim 7, wherein the structural description information includes coupling attribute information indicative of a coupling attribute between the programs, and

the program further comprises causing the computer

to select a tightly coupled thread group from among the plurality of threads based on the coupling attribute information, the tightly coupled thread group including a set of tightly coupled threads running in cooperation with each other, and

causing the computer to determine several processors of the processors, to which the tightly coupled threads are to be assigned, to simultaneously execute the tightly coupled threads by the several processors, the several processors being equal in number to the tightly coupled threads.

9. The program according to claim 8, wherein each of the several processors includes a local memory, and the program further comprises causing the computer to map the local memory of one of the several processors, which executes one of the tightly coupled threads, in part of an effective address space of another of the tightly coupled threads executed by another of the several processors.

10. An information processing system which performs a real-time operation including a combination of a plurality of tasks, the system comprising:

a plurality of processors;

a storing unit configured to store structural description information and a plurality of programs describing procedures corresponding to the tasks, the structural description information indicating

a relationship in input/output between the programs and including cost information concerning time required for executing each of the programs; and

a scheduling unit configured to perform a scheduling operation of assigning a plurality of threads for execution of the programs to at least one of the processors by determining an execution start timing and execution term of each of the threads based on the structural description information.

11. The information processing system according to claim 10, wherein the structural description information includes coupling attribute information indicative of a coupling attribute between the programs, and

the scheduling unit includes a selector to select a tightly coupled thread group from among the plurality of threads based on the coupling attribute information, the tightly coupled thread group including a set of tightly coupled threads running in cooperation with each other, and a determining unit configured to determine several processors of the processors, to which the tightly coupled threads are to be assigned, to simultaneously execute the tightly coupled threads by the several processors, the several processors being equal in number to the tightly coupled threads.

12. The information processing system according to claim 11, wherein each of said plurality of processors

includes a local memory, and the system further comprises a mapping unit configured to map the local memory of one of the several processors, which executes one of the tightly coupled threads, in part of an effective address space of another of the tightly coupled threads executed by another of the several processors.